Please type. Do not complete by hand.

Games

FORM 1 GENERAL

EPA

U.S. ENVIRONMENTAL PROTECTION AGENCY

GENERAL INFORMATION

Consolidated Permits Program

(Read the "General Instructions" before starting)

I. EPA I.D. NUMBER

3PE00008*KD

LABEL ITEMS

I. EPA I.D. NUMBER

III. FACILITY NAME

V. FACILITY MAILING ADDRESS

VI. FACILITY LOCATION

3PE00008*LX
OH0027987

Check I.D. # 395225
Revenue I.D. # 596593
Person I.D. #
Org. I.D. #
Place I.D. # 41873

Ohio EPA
NEDO Revenue

MAJOR

If a preprinted label has been provided, affix it in the designated space. Review the information carefully; if any of it is incorrect, cross through it and enter the correct data in the appropriate fill-in below. Also, if any of the preprinted data is absent *(the area to the left of the label space lists the information that should appear)*, please provide it in the proper fill-in area(s) below. If the label is complete and correct, you need not complete Items I, III, V, and VI *(except VI-B which must be completed regardless)*. Complete all items if no label has been provided. Refer to the instructions for detailed item descriptions and for the legal authorizations under which this data is collected.

II. POLLUTANT CHARACTERISTICS

INSTRUCTIONS: Complete A through G to determine whether you need to submit any permit application forms to the EPA. If you answer "yes" to any questions, you must submit this form and the supplemental form listed in the parenthesis following the question. Mark "X" in the box in the third column if the supplemental form is attached. If you answer "no" to each question, you need not submit any of these forms. You may answer "no" if your activity is excluded from permit requirements; see Section C of the instructions. See also, Section D of the instructions for definitions of **bold-faced terms.**

SPECIFIC QUESTIONS	MARK 'X' YES	NO	FORM ATTACHED	SPECIFIC QUESTIONS	MARK 'X' YES	NO	FORM ATTACHED
A. Is this facility a **publicly owned treatment works** which results in a **discharge** to **waters of the U.S.?** (FORM 2A)	X		X	B. Does or will this facility *(either existing or proposed)* include a **concentrated animal feeding operation** or **aquatic animal production facility** which results in a **discharge** to **waters of the U.S.?** (FORM 2B)		X	
C. Is this a facility which currently results in **discharges** to **waters of the U.S.** other than those described in A or B above? (FORM 2C)		X		D. Is this a proposed facility (*other than those described in A or B above*) which will result in a **discharge** to **waters of the U.S.?** (FORM 2D)		X	
E. Is this a facility which does not discharge process **wastewater?** (FORM 2E)		X		F. Is this a facility which discharges stormwater associated with industrial activity? (FORM 2F)		X	
G. Do you generate **sewage sludge** that is ultimately regulated by Part 503? Do you generate **sewage sludge** that is sent to another **facility** for treatment or blending? Do you process or derive material from **sewage sludge** that is disposed in a manner subject to Part 503? (FORM 2S)	X		X	REC'D DEC 05 2006			

III. NAME OF FACILITY

City of Warren, Ohio Water Pollution Control Facility

IV. FACILITY CONTACT

A. NAME & TTILE *(last, first, title)*	B. PHONE *(area code & no.)*
Angelo, Thomas - Director (ww4-1008404-03)	(330) 841 - 2591

V. FACILITY MAILING ADDRESS

A. STREET OR P.O. BOX			
2323 S. Main St.			
B. CITY OR TOWN	**C. STATE**	**D. ZIP CODE**	
Warren	Ohio	44481	

VI. FACILITY LOCATION

A. STREET, ROUTE NO. OR OTHER SPECIFIC IDENTIFIER			
2323 S. Main St.			
B. COUNTY NAME			
Trumbull			
C. CITY OR TOWN	**D. STATE**	**E. ZIP CODE**	**F. COUNTY CODE** *(if known)*
Warren	Ohio	44481	

RECEIVED

DEC 01 2006

EPA Form 3510-1 (Revised Ohio EPA use 2/06)

CONTINUE ON REVERSE

PAID

OHIO EPA NEDO

AMT 200.00 DATE 12-1-06

CK # 13290 DATE 11-29-06

Click to clear all entered information (on both pages of this form) CLEAR

CONTINUED FROM THE FRONT

VII. SIC CODES (4-digit, in order of priority)

A. FIRST	B. SECOND
(specify) 4950	(specify)
C. THIRD	**D. FOURTH**
(specify)	(specify)

VIII. OPERATOR INFORMATION

A. NAME	B. Is the name listed in Item VIII-A also the owner?
City of Warren, Ohio	☒ Yes ☐ No

C. STATUS OF OPERATOR (Enter the appropriate letter into the answer box; if "Other", specify.)		D. PHONE (area code & no.)
F = FEDERAL S = STATE P = PRIVATE M = PUBLIC (other than federal or state) O = OTHER (specify)	M (specify)	(330) 841 - 2591

E. STREET OR P.O. BOX			
2323 S. Main St.			
F. CITY OR TOWN	**G. STATE**	**H. ZIP CODE**	**IX. INDIAN LAND**
Warren	Ohio	44481	Is this facility located on Indian lands? ☐ Yes ☒ No

X. EXISTING ENVIRONMENTAL PERMITS

A. NPDES (Discharges to surface water)	D. PSD (Air emissions from proposed sources)	
3PE00008*KD		
B. UIC (Underground injection of fluids)	**E. OTHER (specify)**	
		(specify)
C. RCRA (Hazardous waste)	**F. OTHER (specify)**	
		(specify)

XI. MAP

Attach to this application a topographical map of the area extending to at least one mile beyond property boundaries. The map must show the outline of the facility, the location of each of its existing and proposed intake and discharge structures, each of its hazardous waste treatment, storage, or disposal facilities, and each well where it injects fluids underground. Include all springs, rivers, and other surface water bodies in the map area. See instructions for precise requirements.

XII. NATURE OF BUSINESS (provide a brief description)

Municipal Wastewater Treatment Facility and Biosolids Processing Facility

XIII. CERTIFICATION (see instructions)

I certify under penatly of law that I have personally examined and am famimliar with the information submitted in this application and all attachments and that, based on my inquiry of those persons immediately responsible for obtaining the information contained in the application, I belive that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

A. NAME & OFFICIAL TITLE (type or print)	B. SIGNATURE	C. DATE SIGNED
Thomas A. Angelo / Director		11/28/06

COMMENTS FOR OFFICIAL USE ONLY

For Agency Use	Facility Name:	Date Received (yy/mm/dd)
	Ohio EPA Permit Number:	Application Number:

OhioEPA

Form 2A
NPDES Application for Permit to Discharge Wastewater Publicly-Owned Treatment Works

I. Outfall Information

(All treatment works must complete Part I)

A. Description of Outfall. List all effluent outfalls through which sanitary wastewater is discharged. Do not include information on combined sewer overflows (CSO) or collection system / treatment works bypass points.

Outfall Number	Latitude			Longitude			Discharge Point Location	Receiving Water
	Deg.	Min.	Sec.	Deg.	Min.	Sec.		
	41N	12'	08"	80W	48'	02"	Final Effluent	Mahoning River

Latitude/Longitude Data Comments: _____

B. Intermittent Discharges. Except for storm runoff, leaks, or spills are any of the discharges described in Item A intermittent or seasonal?

_____ Yes *(Complete the following table)* ___X___ No

Outfall Number	Period of Discharge	Frequency	Duration

II. Treatment Works Information

(All treatment works must complete Part II. The treatment works includes the collection system and treatment plant.)

A. Population. List the municipalities or areas served *(municipalities and unincorporated service areas)*. Also, list their populations or total population served. *(Attach additional pages as needed)*

Municipality or Area	Population Served
City of Warren, Ohio	47,625
Village of Lordstown, Ohio	5,736
Champion Township, Ohio	9,762
Howland Township, Ohio	1,525
Warren, Township, Ohio	850
Total Population Served:	65,498

Click to clear all entered information (on all 6 pages of this form) CLEAR

B. Collection System

1. Indicate the type(s) of collection system(s) tributary to this treatment plant; check all that apply. Also estimate the percent contribution (by miles) of each.

X	Separate Sanitary Sewer	100 %
	Combined Storm and Sanitary Sewer	%

2. Are you responsible for maintenance of the entire collection system tributary to the treatment plant?

X Yes _____ No *(List entities who are responsible for the collection system below)*

3. Total number of lift stations in your collection system.

7 Separate Sanitary
_____ Combined Storm and Sanitary

4. Does your collection system have bypasses or overflows? *(Do not include CS0s)*

X Yes _____ No

If yes, are the overflows or bypasses:

X a. at locations specifically constructed to provide hydraulic relief to the collection system
_____ b. unintentional and beyond the reasonable control of the operator

For the overflows or bypasses that are "specifically constructed", complete the following table.

Discharge Point Location	Latitude			Longitude			Receiving Water	Treatment Description
	Deg.	Min.	Sec.	Deg.	Min.	Sec.		
High St./N. Park	41N	14'	15"	80W	49'	13"	Mahoning River	See Cover Letter

Latitude/Longitude Data Comments: _____

5. List source(s) of water supply that services the entire collection system. *(Attach additional pages as needed)*

Source Type	Source Location	Owner
Lake	Trumbull County	Army Corp of Engineers
Private Well	Various	Various

C. Inflow and Infiltration

1. Estimate the current average inflow and infiltration flow rate in gallons per day (gpd) for the sewerage system:

25 gpd

2. Briefly explain any steps underway or planned to minimize inflow and infiltration. *(Attach additional pages as needed)*
Warren's 2004 Comprehensive Sewer System Master Plan (Summary attached)

D. Flow. Indicate the design influent flow rate of your treatment plant. Also provide the annual average daily flow rate for each of the last three years (mgd to three decimal places).

1. Design daily influent flow rate: 16.000 mgd

	Two Years Ago	Last Year	This Year	
2. Annual average daily flow rate:	13.400	10.400	13.700	mgd

3. How was flow rate determined?

X Parshall Flume ___ Weir ___ Venturi ___ Electromagnetic ___ Sonic ___ Estimate ___ Other

4. Location where flow rate was measured: WWPC - Head of Primary Settling Tanks

5. Are there current or expected plans to expand the existing treatment plant capacity during the life of the permit?

_____ Yes *(Provide details on expansion on separate page)* X No

E. Treatment System Description *(Attach additional pages as needed)*

1. Give the approximate year of the treatment plant construction: 1962

2. Give the approximate year of the treatment plant last major modification: 1997

3. List all treatment units at the treatment plant. Do not include units for treating sewage sludge.

Treatment Code *(See Instructions)*	Treatment Type	Manufacturer *(if known)*
02	Preliminary	
03	Preliminary	
08	Primary	
25	Biological	
39	Physical	
70	Chemical	
71	Chemical	

4. Does this treatment plant have provisions for bypassing untreated or partially-treated wastewater?

_____ Yes *(Complete the following table)* X No

Bypass Location	Station Number *(if applicable)*	Bypass Type	Number of times used in last year

5. Does your treatment plant have backup generators or other provision(s) to allow operation and/or treatment to continue during power outages?

X Yes _____ No

6. Provide a line drawing showing the wastewater flow through the treatment plant, including all bypass piping.

F. Treatment Operations

1. Number of employees at the treatment works

10	Collection system	8	hr/day	5	days/wk
39	Treatment plant	24	hr/day	7	days /wk

2. Name and certification of person in responsible charge of the treatment works.
   Thomas A. Angelo - WW4-1008404-03

3. Name and certification of person in responsible charge of each collection system tributary to the treatment plant *(if known). (Attach additional pages as needed)*
   Thomas A. Angelo - WW4-1008404-03
   Gregory Lubert - WW3-1008300-85

4. Does the treatment works (collection system and/or treatment plant) have an Operations and Maintenance Manual?

   X Yes *(Complete the following table. Attach additional pages as needed.)* _____ No

Type	Developed By	Date Developed	Date of Last Modification
Plant	Havens & Emerson	1988	
Plant	In-House	1993	2006
Collection	Havens & Emerson	1980	2004

G. Improvements

1. Are you required by any Federal, State, or local authority to meet any implementation schedule for the construction, upgrading or operation of wastewater treatment equipment or practices or any other environmental programs which may affect the discharges described in this application? This includes, but is not limited to, permit conditions administrative orders, enforcement compliance schedule letters, stipulations, court orders, and grant or loan conditions.

   _____ Yes *(Complete the following table. Attach additional pages as needed.)* X No

Identification of Condition	Outfall Number	Description of Project	Final Compliance Date

2. Optional: You may provide information describing any additional water pollution control programs (or other environmental projects which may affect your discharge) that are currently in progress or planned. Indicate the implementation schedule for the programs.

III. Combined Sewers System Information *(Attach additional pages as needed)*

A. Does the treatment works have CSOs in the collection system?

_____ Yes *(Complete the following table for each CSO)* ___X___ No

Outfall Number	Description	Latitude			Longitude			Receiving Water
		Deg.	Min.	Sec.	Deg.	Min.	Sec.	

Latitude/Longitude Data Comments: _____

B. System Evaluation. List below studies that have been performed of the combined sewer collection system since the last permit application. Include modeling studies, hydraulic studies, past monitoring efforts, facility plans, etc.

Date	Title/Description	Author
_____	_____	_____
_____	_____	_____
_____	_____	_____

IV. Industrial Users Information

A. Number of Industrial Users. Provide the number of each of the following types of industrial users that discharge to this treatment works.

1. Number of Industrial Users: ___10___
2. Number of non-categorical significant industrial users (SIU): ___2___
3. Number of categorical industrial users: ___8___

B. Average Daily Flow from all Industrial Users. Estimate the total average daily wastewater flow from all industrial users.

1. All industrial users: ___3.4___ mgd
2. Non-categorical SIUs only: ___.013___ mgd
3. Categorical industrial users only: ___3.387___ mgd

C. Pretreatment Program. Does this POTW have an approved pretreatment program? ___X___ Yes _____ No

If *no*, does this POTW have technically-based local limits? _____ Yes _____ No

D. Local Limits Evaluation. All POTWs with an approved pretreatment program are required to provide a written technical evaluation of the need to revise local limits under 40 CFR 122.21(j). Attach a copy of the evaluation to the application.

V. Remediation Waste Clean Up Information

A. RCRA/CERCLA/BUSTR/VAP Wastes. Does the treatment works currently receive (or is it expected during the life of the permit to receive) RCRA hazardous waste, CERCLA (Superfund) site remediation waste, RCRA corrective action waste, BUSTR waste or VAP waste?

_____ Yes *(Complete the following table. Attach additional pages as needed.)* ___X___ No

Type of Action	Waste Origin	Waste Description

VI. Contract Laboratory Information

A. Contract Laboratory Analysis Information. Are any of the analyses used to obtain effluent quality information or toxicity test data performed by a contract laboratory or consulting firm?

___X___ Yes *(Complete the following table. Attach additional pages as needed.)* _____ No

Name	Address	Telephone Number	Pollutants Analyzed
American Testing Co., Inc.	5475 Perkins Road, Bedford	440-786-1403	see attached

VII. Biological Toxicity Test Data

POTWs with a design flow rate greater than 1 mgd or POTWs with an approved pretreatment program must provide the results of whole effluent biological toxicity tests for acute or chronic toxicity for each discharge. The tests must have been performed during the last three years and must have followed Ohio EPA testing protocol. **See instructions for minimum test requirements.**

Is a Whole Effluent Biological Toxicity Test being submitted? ___X___ Yes _____ No

If answered *no* above, but required to submit, provide explanation:

VIII. Certification

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information is, to the best of my knowledge and belief, true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

A. NAME AND OFFICIAL TITLE *(type or print)*	B. PHONE NO. *(area code & no.)*
Thomas A. Angelo, Director	(330) 841-2591
C. SIGNATURE	D. DATE SIGNED
	11/22/06

For Agency Use	Facility Name:	Date Received (yy/mm/dd)
	Ohio EPA Permit Number:	Application Number:

OhioEPA

Form 2S
NPDES Application for Sewage Sludge Use or Disposal

I. General Information

A. Treatment System Description

1. List all treatment units used for collecting, dewatering, storing, or treating sewage sludge:

Treatment Code	Treatment Type	Manufacturer
A8	Air Floatation Thickening	
A5	Mechanical Dewatering (Filter Press)	Ash Brook
98	Lime Stabilization	RDP
A1	Air Drying	
C4	Land Spreading	
C6	Distribution and/or Marketing	

2. Provide a line drawing that identifies all sewage sludge treatment processes that will be employed during the term of the permit.

3. Is this facility a Class I sludge management facility? Class I facilities include POTWs required to have an approved pretreatment program.
   ___X___ Yes _____ No

4. Process design capacity of the sewage sludge treatment system (gallons of sludge/yr x 8.34 lb/gal x tons/2000 lb x percent solids): ____20,592____ dry tons/yr

5. Date of the sewage sludge treatment system construction or last major modification: _____10/15/1997_____

B. Amount Generated On Site

1. Total sewage sludge generated at your facility for the most recent year: ____2838.4____ dry tons

2. Do you receive sewage sludge from other generators? ___X___ Yes _____ No

   If *yes*, total received from other generators for the most recent year: ____813.86____ dry tons

3. Do you receive domestic septage? ___X___ Yes _____ No

   If *yes*, total amount of domestic septage received for the most recent year: ____832,780____ gallons

Click to clear all entered information (on all 5 pages of this form) CLEAR

C. Pollutant Information. Using the table below, provide data on the pollutant concentrations in sewage sludge from your facility during the previous year.

Laboratory Name: American Testing

Pollutant Name	CAS #	No. of Analyses	Average Concentration (mg/kg)	Maximum Monthly Average Concentration (mg/kg)	Range of Data (Min. - Max.) (mg/kg)	Minimum Detection Level
Arsenic	7440-38-2	12	4.375	5	<2.0-5	<2.0
Cadmium	7440-43-9	12	<2.0	2.8	<2.0-2.8	<2.0
Copper	7440-50-8	12	133	302	53-302	10
Lead	7439-92-1	12	47.5	122	21-122	10
Mercury	7439-97-6	12	.61	.8	<.2-.8	<.2
Molybdenum	7439-98-7	12	47.4	82.5	18-82.5	10
Nickel	7440-02-0	12	45.18	124	30-45.18	10
Selenium	7782-49-2	12	16.67	19	<2.0-19	<2.0
Zinc	7440-66-6	12	587	1973	276-1973	10

D. Sewage sludge treatment and disposal characteristics. Complete the following to determine the applicability of your facility's sewage sludge use or disposal practices. If you answer yes to any question, you must complete the applicable section. Complete all sections that apply to your facility.

No	Is sewage sludge from your facility hauled to another facility that provides treatment or blending? This section does not apply to sewage sludge hauled to land application or surface disposal sites. **(Section II: Shipment Off Site for Treatment)**
Yes	Is sewage sludge from your facility applied to the land? This section includes exceptional quality sewage sludge (EQS) and sewage sludge applied to land reclamation sites. **(Section III: Land Application of Bulk Sewage Sludge)**
No	Is sewage sludge from your facility placed on a surface disposal site? **(Section IV: Surface Disposal)**
No	Is sewage sludge from your facility fired in a sewage sludge incinerator? **(Section V: Incineration)**
No	Is sewage sludge from your facility placed on a municipal solid waste landfill? **(Section VI: Disposal In a Municipal Solid Waste Landfill)**

II. Shipment Off Site for Treatment or Blending

A. Total sewage sludge hauled to all receiving facilities for the most recent year: _____ dry tons

B. Information on off site treatment or blending. Complete this section for each receiving facility *(Attach additional pages as necessary)*

1. Name of facility: _____

2. Facility contact: Name: _____

   Title: _____ Phone: _____

3. Facility location: Street: _____

   City: _____ State: _____ Zip: _____

4. Total sewage sludge provided to this receiving facility for the most recent year: _____ dry tons

III. Land Application of Bulk Sewage Sludge

A. Land Application Generation Information

1. Total sewage sludge from your facility applied to all land application sites for the most recent year: 5,374.12 dry tons

2. Total number of land application sites currently assigned an Ohio EPA site identification number: N/A

3. Total acreage of land application sites currently assigned an Ohio EPA site identification number: N/A

4. List all counties that you currently (or you expect during the life of the permit to) land apply sewage sludge.
   Bulk - Trumbull, Mahoning, Ashtabula, Geauga, Portage, Columbiana, Lake
   Bagged - State of Ohio, West Virginia, Pennsylvania

5. Are any land application sites located in states other than Ohio? X Yes _____ No

   If yes, describe how you notify the permitting authority for the States where the land application sites are located.
   Separate PTI and Sludge Reporting form with the Pennsylvania DEP also Dept. Of Agricultural

6. Does sewage sludge from your facility meet the ceiling concentration limits in Table 1 of 40 CFR 503.13 and the pollutant concentrations in Table 3 of 40 CFR 503.13? X Yes _____ No

   If yes, provide total percentage from Section III A.1 that met the ceiling and pollutant concentrations for the most recent year that was land applied: 100%

7. Does sewage sludge from your facility meet the ceiling concentrations in Table 1 of 40 CFR 503.13 but does not meet the pollutant concentrations in Table 3 of CFR 503.13? _____ Yes X No

   If yes, provide total percentage from Section III A.1 that met the ceiling concentrations but not the pollution concentrations for the most recent year that was land applied: _____

8. What percentage of sewage sludge from Section III A.1 (in dry tons per year) is achieved for each pathogen reduction class? 100% Class A _____ Class B

9. Which Pathogen Reduction Alternative is used to achieve the class? *(Choose all that apply)*

	Class A		**Class B**
	Thermally Treated Biosolids		Monitoring of Indicator Organisms
X	Biosolids Treated in a High pH- Temp.		PSRP, Aerobic Digestion
	Biosolids Treated in Other Processes		PSRP, Air Drying
	Biosolids Treated in Unknown Processes		PSRP, Anaerobic Digestion
	PFRP, Composting		PSRP, Composting
	PFRP, Heat Drying		PSRP, Lime Stabilization
	PFRP, Thermophilic Aerobic Digestion		Biosolids Treated in a PSRP Equivalent
	PFRP, Beta Ray Irradiation		
	PFRP, Gamma Ray Irradiation		
X	PFRP, Pasteurization		
	PFRP, Heat Treatment		
	Biosolids Treated in a PFRP Equivalent		

10. Which Vector Attraction Reduction option is met for the sewage sludge at your facility? *(Choose all that apply)*

	VAR Option
	Option 1 (Minimum 38 percent reduction in volatile solids)
	Option 2 (Anaerobic process, with bench-scale demo)
	Option 3 (Aerobic process, with bench-scale demo)
	Option 4 (Specific oxygen uptake rate for aerobic digested sludge)
	Option 5 (Aerobic process plus raised temperature)
X	Option 6 (Raise pH to 12 and retain at 11.5)
	Option 7 (75 percent solids with no unstabilized solids)
	Option 8 (90 percent solids with unstabilized solids)
	Option 9 (Injection below land surface)
	Option 10 (incorporation into soil within 24 hours)
	Option 11 (Cover sludge placed on a surface disposal)
	Option 12 (Domestic septage pH adjustment)

B. Spill Contingency Plan. All facilities that land apply sewage sludge are required to have a spill contingency plan.

1. Date spill contingency plan was submitted to Ohio EPA: _____

2. Have there been any substantial modifications to the spill contingency plan since it was submitted to Ohio EPA?
   _____ Yes _____ No

   If yes, please submit a copy of the modified spill contingency plan to the appropriate district office.

IV. Surface Disposal

A. Total sewage sludge from your facility placed on all surface disposal sites for the most recent year: _____ dry tons

B. Information on Active Sewage Sludge Units. Complete this section for each active sewage sludge unit. *(Attach additional pages as necessary)*

1. Name of facility: _____

2. Facility contact: Name: _____

   Title: Director Phone: _____

3. Facility location: Street: _____

   City: _____ State: _____ Zip: _____

4. Total sewage sludge placed on the active sewage sludge unit for the most recent year: _____ dry tons

V. Incineration

A. Total sewage sludge from your facility fired in all sewage sludge incinerators for the most recent year: _____ dry tons

B. Information on Sewage Sludge Incinerators. Complete this section for each incinerator. *(Attach additional pages as necessary)*

1. Name of facility: _____

2. Incinerator air permit number: _____

3. Facility contact: Name: _____

   Title: _____ Phone: _____

4. Facility location: Street: _____

   City: _____ State: _____ Zip: _____

5. Total sewage sludge from your facility fired in this sewage sludge incinerator for the most recent year:

   _____ dry tons

VI. Disposal in a Municipal Solid Waste Landfill

A. Total sewage sludge from your facility placed in all municipal solid waste landfills for the most recent year:

_____ dry tons

B. Information on municipal solid waste landfills. Complete this section for each municipal solid waste landfill. *(Attach additional pages as necessary)*

1. Name of facility: _____

2. Facility contact: Name: _____

   Title: _____ Phone: _____

3. Facility location: Street: _____

   City: _____ State: _____ Zip: _____

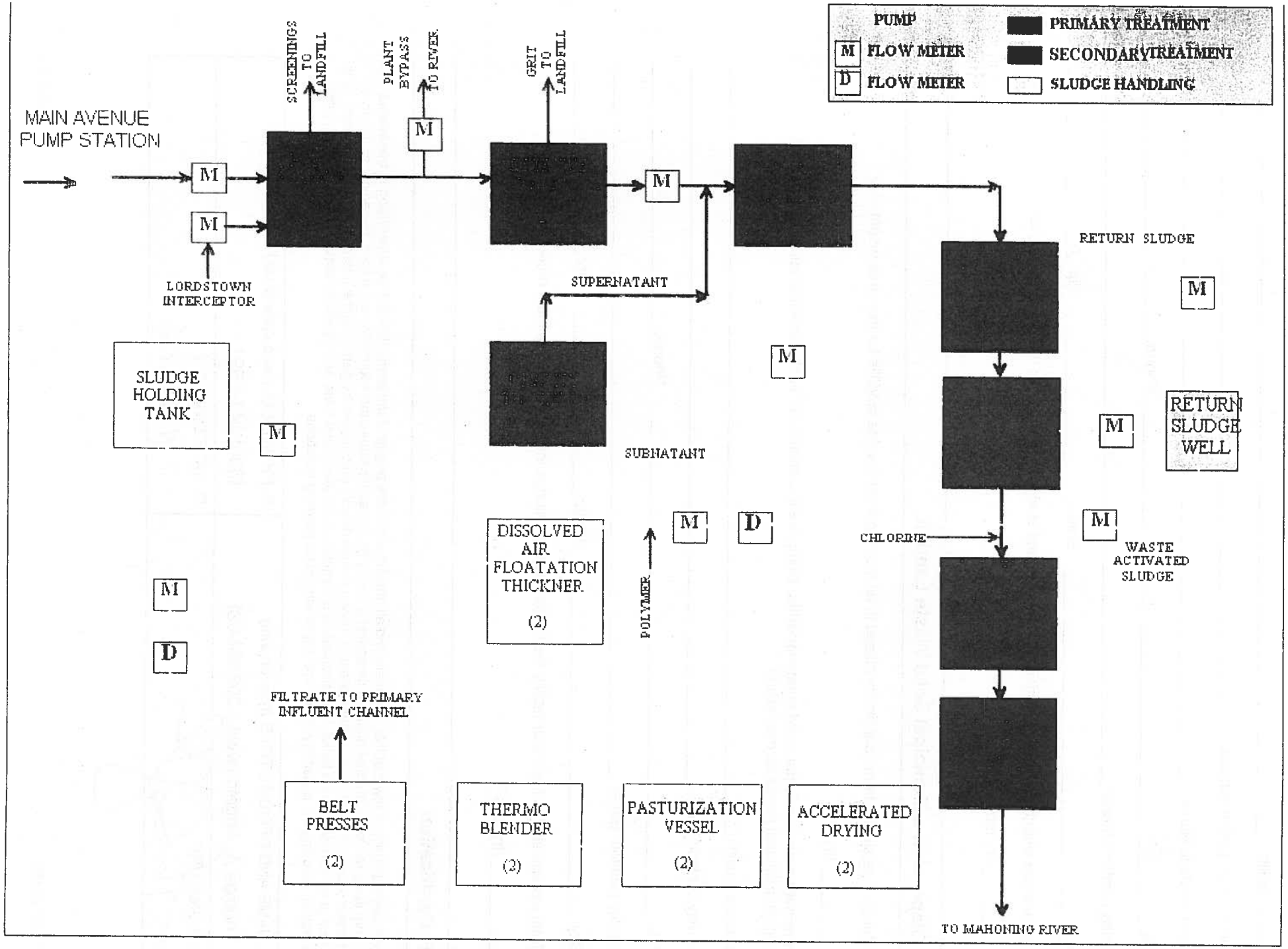
4. Total sewage sludge from your facility fired in this sewage sludge incinerator for the most recent year:

   _____ dry tons

VII. Certification

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information is, to the best of my knowledge and belief, true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

A. NAME AND OFFICIAL TITLE *(type or print)*	B. PHONE NO. *(area code & no.)*
Thomas A. Angelo (ww4-1008404-03)	(330) 841-2591
C. SIGNATURE	D. DATE SIGNED
	11/28/06


PUMP
M FLOW METER
D FLOW METER
PRIMARY TREATMENT
SECONDARY TREATMENT
SLUDGE HANDLING
MAIN AVENUE PUMP STATION
SCREENINGS TO LANDFILL
PLANT BYPASS TO RIVER
GRIT TO LANDFILL
LORDSTOWN INTERCEPTOR
SUPERNATANT
RETURN SLUDGE
SLUDGE HOLDING TANK
SUBNATANT
RETURN SLUDGE WELL
DISSOLVED AIR FLOATATION THICKNER (2)
POLYMER
CHLORINE
WASTE ACTIVATED SLUDGE
FILTRATE TO PRIMARY INFLUENT CHANNEL
BELT PRESSES (2)
THERMO BLENDER (2)
PASTURIZATION VESSEL (2)
ACCELERATED DRYING (2)
TO MAHONING RIVER

DIVISION OF SURFACE WATER

Antidegradation Addendum

In accordance with Ohio Administrative Code 3745-1-05 (Antidegradation), additional information may be required to complete your application for a permit to install or NPDES permit. For any application that may result in an increase in the level of pollutants being discharged (NPDES and/or PTI)or for which there might be activity taking place within a stream bed, the processing of the permit(s) may be required to go through procedures as outlined in the antidegradation rule. The rule outlines procedures for public notification and participation as well as procedures pertaining to the levels of review necessary. The levels of review necessary depend on the degradation being considered/requested. The rule also outlines exclusions from portions of the application and review requirements and waivers that the Director may grant as specified in Section 3745-1-05(D) of the rule. Please complete the following questions. The answers provided will allow the Ohio EPA to determine if additional information is needed. **All projects that require both an NPDES and PTI should submit both applications simultaneously to avoid going through the antidegradation process separately for each permit.**

A. **Applicant:** Warren Waste Water Treatment Facility

Facility Owner: City of Warren, OHIO

Facility Location (city and county): Warren, TRUMBULL

Application or Plans Prepared By: Thomas A. Angelo

Project Name: N/A

NPDES Permit Number (if applicable): 3PE00008*KD

B. **Antidegradation Applicability**

Is the application for? (check as many as apply):

____ Application with no direct surface water discharge (Projects that do not meet the applicability section of 3745-1-05(B)1, i.e., on-site disposal, extensions of sanitary sewers, spray irrigation, indirect discharger to POTW, etc.). (Complete Section E)

X Renewal NPDES application or PTI application with no requested increase in loading of currently permitted pollutants. (Complete Section E, Do not complete Sections C or D).

____ PTI and NPDES application for a new wastewater treatment works that will discharge to a surface water. (Complete Sections C and E)

____ An expansion/modification of an existing wastewater treatment works discharging to a surface water that will result in any of the following (PTI and NPDES):(Complete Section C and E)

- addition of any pollutant not currently in the discharge, or
- an increase in mass or concentration of any pollutant currently in the discharge, or
- an increase in any current pollutant limitation in terms of mass or concentration.

collection and treatment facilities, including long range plans for sewer service outlined in state or local water quality management planning documents and applicable facility planning documents.

b. List and describe all government and/or privately sponsored conservation projects that may have been or will be specifically targeted to improve water quality or enhance recreational opportunities on the effected water resource.

c. Provide a brief description below of all treatment/disposal alternatives evaluated for this application and there respective operational and maintenance needs. (If additional space is needed please attach additional sheets to the end of this addendum).

Preferred design alternative:_____
_____
_____

Non-degradation alternative'(s):_____
_____
_____

Minimal degradation alternative'(s):_____
_____
_____

Mitigative technique/measure'(s):_____
_____
_____
_____

At a minimum, the following information must be included in the report for each alternative evaluated.

d. Outline of the treatment/disposal system evaluated, including the costs associated with the equipment, installation, and continued operation and maintenance.

e. Identify the substances to be discharged, including the amount of regulated pollutants to be discharged in terms of mass and concentration.

f. Describe the reliability of the treatment/disposal system, including but not limited to the possibility of recurring operation and maintenance difficulties that would lead to increased degradation.

g. Describe any impacts to human health and the overall quality and value of the water resource.

h. Describe and provide an estimate of the important social and economic benefits to be realized through this proposed project. Include the number and types of jobs created and tax revenues generated.

i. Describe environmental benefits to be realized through this proposed project.

j. Describe and provide an estimate of the social and economic benefits that may be lost as a result of this project. Include the impacts on commercial and recreational use of the water resource.

Pollutants Analyzed
By
American Testing Company, Inc.

Total Cyanide	1/month
Free Cyanide	3/month
Lead	3/month
Selenium	3/month
Thallium	3/month
Mercury	1/month
Low-Level Mercury	2/month
Antimony	1/month

Biosolids 1/month

NH3-N	Cadmium
Chromium	Copper
Mercury	Nickel
Phosphorus	PCB's
Arsenic	Lead
Zinc	Molybdenum
Selenium	Aluminum
Calcium	Iron
Sulfur	

May 10, 2006

Mr. Sam Ludwick
City of Warren, WPC
2323 Main Avenue, SW
Warren, OH 44481

Re: Permit 3PE00008*KD

Dear Mr. Ludwick:

Enclosed are two copies of EnviroScience's report for the following whole effluent toxicity (WET) tests that were initiated on May 2, 2006:

(1) 3-brood static, renewal chronic bioassay using *Ceriodaphnia dubia* (water flea), and
(1) 7-day static, renewal chronic bioassay using *Pimephales promelas* (fathead minnow).

The tested concentrations were 5, 10, 20, 40, 80, and 100 percent effluent. Effluent was diluted with synthetic freshwater. The effluent was not shown to be acutely or chronically toxic to water fleas or minnows.

WET endpoints for City of Warren, Ohio WPC 3PE00008*KD, 05/2006
sample collection period: 04/30/06 - 05/05/06

Outfall 001:

C. dubia (flea)	acute	TU_a = AA	(<0.2)
P. promelas (minnow)	acute	TU_a = AA	(<0.2)
C. dubia (flea)	chronic	TU_c = AA	(<1.0)
P. promelas (minnow)	chronic	TU_c = AA	(<1.0)

Please don't hesitate to call me if you have any questions.

Sincerely,

Nancy A. Black

Nancy A. Black, Aquatic Biologist

enclosures

3781 DARROW ROAD, STOW, OHIO 44224
330-688-0111 / TOLL FREE: 800-940-4025 / FAX: 330-688-3858

ES ENVIRO SCIENCE INCORPORATED

FINKBEINER, PETTIS & STROUT, INC.

October 8, 2003

CONSULTING ENGINEERS
SINCE 1900
SUITE 2400
520 SOUTH MAIN STREET
AKRON, OHIO 44311-1010
330-434-1995
800-456-0817
330-374-1095 FAX

Mr. James Wilden
Superintendent, Warren WPCC
City of Warren
2323 Main Avenue, S.W.
Warren, Ohio 44481

Re: Warren, Ohio
Industrial Pretreatment Program
Evaluation of Local Limits

Dear Mr. Wilden:

We are pleased to submit the Evaluation of the Local Limits Report for the City's Industrial Pretreatment Program. The Evaluation is a requirement of the City's National Pollutant Discharge Elimination System (NPDES) Permit, (No. 3PE00008*KD) that became effective on August 1, 2002.

You should note in the Evaluation that the limits have increased for all parameters that currently have a limit in the City's ordinance. It is recommended that the existing local limits be revised and the new local limits be added to the City's ordinance after approval by the Ohio EPA. However, based on the data presented in the report, it is recommended that the City should not establish a local limit for Thallium.

After the City has reviewed and approved the evaluation, please submit two copies to:

Mr. Andrew Conway, E.I.T.
Environmental Specialist 2
Ohio EPA
DSW – Pretreatment Unit
122 South Front Street
P.O. Box 1049
Columbus Ohio 43216-1049

Thank you for the opportunity to prepare this evaluation for the City. We look forward to working with you on future projects. If you have any questions or comments, please feel free to contact us.

STATE OF OHIO
DAVID A. FRANK
23269
REGISTERED PROFESSIONAL ENGINEER

STATE OF OHIO
THOMAS R. POWELL
45970
REGISTERED PROFESSIONAL ENGINEER

Sincerely,

Thomas R. Powell

Thomas R. Powell, P.E.

David A. Frank, P.E.

TRP/DAF/lmd

Enclosure

CITY OF WARREN

INDUSTRIAL PRETREATMENT PROGRAM

EVALUATION OF LOCAL LIMITS

EXECUTIVE SUMMARY

Items 1.a., b., c., d. and e. in Part I, C of the City's NPDES Permit (No. 3PE00008*KD, approved on August 1, 2002) required an evaluation of the local limits in the City's Industrial Pretreatment Program (IPP). This evaluation includes a review of existing loadings from industries, the background concentrations in the residential/commercial wastewater and the effect of industrial wastewater on the operation of the Water Pollution Control Center (WPCC).

Background concentrations were determined from sampling performed during 2002 in residential/ commercial areas connected to the sewers. Information on affected industries was obtained from the City's IPP records. WPCC data from 2002 were used to develop removal rates at the WPCC.

Spreadsheets developed by the Ohio EPA were used to generate the updated local limits that will be required to meet NPDES Permit effluent limits, to prevent process inhibition and to meet sludge disposal regulations.

The updated local limits for the City's Industrial Pretreatment Program are presented in Table 1. The proposed and current local limits for each pollutant are shown at the right side of the table. The proposed limits are based on annual average WPCC and industrial flows, WPCC removal rates and background sampling of residential/commercial areas from 2002. If any of these items should significantly change, the local limits should be reviewed and updated.

TABLE 1
LOCAL LIMITS DEVELOPMENT CRITERIA

Parameter	NPDES Effluent Limits (mg/l)	Activated Sludge Inhibition (mg/l)	Nitrification Inhibition (mg/l)	503 Regulations (mg/l)	Proposed Local Limit (mg/l)	Current Local Limit (mg/l)
Antimony (Sb)	4.52	---	---	---	4.52	
Arsenic (As)	---	3.18	61.87	11.16	3.18	
Cadmium (Cd)	18.45	488.19	5396.87	56.53	18.45	0.495
Chromium (Cr)	42.42	27.33	11.05	---	11.05	1.44
Chromium, hexavalent	11.70	170.42	407.08	---	11.70	0.9
Copper (Cu)	0.94	5.63	1.10	22.70	0.94	0.18
Cyanide (Cn), Free	5.70	---	---	---	5.70	0.205
Cyanide (Cn), Total	---	2.16	21.82	---	2.16	
Lead (Pb)	1.00	1.02	12.34	4.38	1.00	0.187
Mercury (Hg)	0.0048	4.28	---	3.21	0.0048	
Molybdenum (Mb)	---	---	---	0.96	0.96	
Nickel (Ni)	7.64	5.38	3.50	2.79	2.79	1.184
Selenium (Se)	1.68	---	---	7.71	1.68	
Silver (Ag)	---	22.15	---	---	22.15	
Zinc (Zn)	3.30	---	1.40	40.42	1.40	0.54

* Local limit for Selenium was calculated based on the effluent limit in Part I, A in NPDES Permit No. No. 3PE00008*KD. Remaining local limits were calculated based on the water quality based criteria noted in Part II, X in the NPDES Permit.

** Local limits approved as of 04/23/97.

Thallium does not appear in the influent and effluent of the WPCC, in the background concentration sampling and at any of the permitted industries in amounts above the detection limits. Thus, a local limit was not calculated for Thallium. The City should consider requesting a modification to the NPDES Permit to remove Thallium from the required effluent monitoring.

Table 1 shows that the proposed local limits have increased for all parameters that currently have a limit in the City's ordinance. The remaining parameters are ones required to have a local limit by the City's NPDES Permit, but are not established in the current City ordinance. It is recommended that the City revise their ordinance to update the existing local limits and add the new local limits after this evaluation has been approved by Ohio EPA.

One industry requires a loading limit for Molybdenum. According to the results in the "Industrial – Allowable Loading" column in Tables B-1 through B-4, the most stringent loading for Molybdenum is 8.93 pounds per day that can be discharged to the WPCC from a permitted industry.

WATER POLLUTION CONTROL CENTER

The Warren Water Pollution Control Center (WPCC) is a secondary treatment plant designed to treat an average daily flow of 16.5 million gallons per day (mgd) and a peak flow of 40 mgd. During 2002, the average daily flow was 14.3 mgd. As the flow enters the WPCC, it passes through screens to remove large debris and through detritus tanks to remove grit. The flow then proceeds through the primary settling tanks, aeration tanks, and final settling tanks. The secondary effluent is chlorinated, proceeds through the chlorine contract tank and post-aeration tanks and then is dechlorinated. The final effluent is discharged to the Mahoning River. Primary and secondary sludges are thickened and sent to the sludge holding tank. The sludge is then dewatered and converted to Class A sludge product (called "Nature's Blend") by processing in thermo blenders (with lime) and a pasteurization vessel. During 2002, the WPCC processed approximately 60,000 gpd of Class A sludge with a solids concentration of approximately 23 percent.

The WPCC currently operates under NPDES Permit No. 3PE00008*KD, effective on August 1, 2002.

LOCAL LIMITS EVALUATION

The local limits evaluation is based on the WPCC's 2002 operating data. Table A-1 in Appendix A summarizes the removal efficiency of the WPCC for the parameters requiring local limits. Background concentrations of the parameters in wastewater were determined from samples gathered three times during 2002 from manholes in representative residential/commercial areas. An average of the background concentrations is shown in Table A-2. The City has monitored industries for many years and knows which ones discharge certain parameters to the WPCC. Table A-3 shows the 2002 flow attributable to each parameter from each industry that discharged greater than background concentration to the WPCC.

Spreadsheets developed by the Ohio EPA were used to calculate the local limits. These spreadsheets are included as Appendix B. Sampling and metering data from Appendices A, B and C were inputted to the spreadsheets. Some data, such as removal efficiencies through the primary treatment process and inhibition levels for activated sludge and nitrification, were not available from the City. USEPA's *Guidance Manual on the Development and Implementation of Local Discharge Limitations under the Pretreatment Program* (EPA No. 833-B-87-202, December 1987) was used to obtain the data when it was not available from the City.

Local limits were calculated based on the following criteria:

A. NPDES Effluent Limits.

B. Activated Sludge Inhibition Levels.

C. Nitrification Inhibition Levels.

D. USEPA 503 Sludge Regulations.

Table 1 in the Executive Summary presents the local limit concentrations developed using the data and spreadsheet calculations discussed herein. The revised local limits are uniform concentrations for permitted industries discharging greater than background concentrations for particular parameters as shown in Table A-3. One industry requires a loading limit for Molybdenum. The "Industrial – Allowable Loading" column in Tables B-1 through B-4 shows the allowable loading limits for each criteria. The most stringent of these criteria is 8.93 pounds per day of Molybdenum that a permitted industry can discharge to the WPCC.

APPENDIX A

WARREN WPCC
BACKGROUND SAMPLING AND INDUSTRY DATA

2002

TABLE A-1 WARREN, OHIO INDUSTRIAL PRETREATMENT PROGRAM WPCC REMOVAL EFFICIENCIES 2002			
	Influent (ug/l)	Effluent (ug/l)	Removal Efficiency
Antimony (Sb)	2.5*	2.5*	0%
Arsenic (As)	4.32	3.41	21%
Cadmium (Cd)	1.8	0.7	60%
Chromium (Cr)	6.69	2.98	55%
Chromium, hexavalent	3	1.25	58%
Copper (Cu)	29.8	5.6	81%
Cyanide (Cn), Total	46.77	2.5*	93%
Cyanide (Cn), Free	24.4	6.18	75%
Lead (Pb)	7.01	1.29	82%
Mercury (Hg)	0.204	0.07	66%
Molybdenum (Mb)	56.36	37.64	33%
Nickel (Ni)	21.24	7	67%
Selenium (Se)	12.94	6.91	47%
Silver (Ag)	4.2	0.5	87%
Zinc (Zn)	93.19	19.1	79%

* Report showed below detectable limits. Per Ohio EPA, use ½ of the detection limit.

Note: The influent and effluent values represent an average for all of the samples obtained during 2002.

TABLE A-2 WARREN, OHIO BACKGROUND SAMPLING 2002	
	Average (ug/L)*
Antimony (Sb)	2.5**
Arsenic (As)	2.5**
Cadmium (Cd)	0.5**
Chromium (Cr)	2.5**
Chromium, hexavalent	5.0**
Copper (Cu)	17.0
Cyanide (Cn), Total	2.5**
Cyanide (Cn), Free	2.5**
Lead (Pb)	2.5
Mercury (Hg)	0.1**
Molybdenum (Mb)	5.0**
Nickel (Ni)	5.0**
Selenium (Se)	5.0
Silver (Ag)	1.1
Zinc (Zn)	75.0

* Average of three samples obtained during 2002 from residential/commercial locations.

** Report showed below detectable limits. Per Ohio EPA, use ½ of the detection limit.

TABLE A-3

WARREN, OHIO

FLOWS* AT SIGNIFICANT INDUSTRIES WITH POLLUTANTS ABOVE BACKGROUND CONCENTRATION

2002

	Alcan	Delphi Dana	Delphi NRR	Excel	General Motors	ISC	Ohio Lamp	Starcycle	Taylor Coil	WSS	Total
Antimony (Sb)	-	-	-	-	-	0.2569	-	0.0139	0.0005	-	0.2713
Arsenic (As)	0.0746	0.0629	-	-	-	0.2569	-	-	-	-	0.3944
Cadmium (Cd)	-	-	-	0.0171	-	-	-	0.0139	-	-	0.0310
Chromium (Cr)	0.0746	0.0629	0.4800	-	-	-	0.0119	0.0139	0.0005	-	0.6438
Chromium, hexavalent	0.0746	-	-	-	-	-	-	-	0.0005	-	0.0751
Copper (Cu)	0.0746	0.0629	0.4800	0.0171	1.9900	0.2569	-	0.0139	0.0005	-	2.8959
Cyanide (Cn), Total	-	0.0629	0.4800	-	-	0.2569	-	-	0.0005	0.0004	0.8007
Cyanide (Cn), Free	-	0.0629	0.4800	-	-	0.2569	-	-	0.0005	0.0004	0.8007
Lead (Pb)	0.0746	0.0629	0.4800	0.0171	1.9900	0.2569	-	0.0139	0.0005	-	2.8959
Mercury (Hg)	-	0.0629	-	-	-	0.2569	-	0.0139	-	-	0.3337
Molybdenum (Mb)	0.0746	0.0629	0.4800	-	1.9900	0.2569	-	0.0139	0.0005	0.0004	2.8792
Nickel (Ni)	-	-	0.4800	0.0171	1.9900	0.2569	0.0119	0.0139	0.0005	-	2.7703
Selenium (Se)	-	0.0629	-	-	-	0.2569	-	0.0139	-	-	0.3337
Silver (Ag)	0.0746	0.0629	-	0.0171	-	-	0.0119	0.0139	0.0005	-	0.1809
Zinc (Zn)	0.0746	0.0629	0.4800	0.0171	1.9900	0.2569	-	0.0139	0.0005	0.0004	2.8963

* Flows for the industries are annual averages in millions of gallons per day (MGD).

APPENDIX B

SPREADSHEETS FOR CALCULATING LOCAL LIMITS

Table B-1 – NPDES Effluent Limits

Table B-2 – Activated Sludge Inhibition

Table B-3 – Nitrification Inhibition Levels

Table B-4 – USEPA 503 Sludge Regulations

The spreadsheet for criteria based on Anaerobic Digestion Inhibition Levels was <u>not</u> used because it is not applicable to the WPCC.

TABLE B-1

Local Limits Determination Based on NPDES Effluent Limits - Warren WPCC

Pollutant	ENVIRONMENTAL CRITERIA AND PROCESS DATA BASE						MAXIMUM LOADING		INDUSTRIAL		
	IU Pollut. Flow (MGD) (Qind)	POTW Flow (MGD) (Qpotw)	Removal Efficiency (%) (Rpotw)	NPDES Effluent Limit* (mg/l) (Ccrit)	Domestic and Commercial Conc. (mg/l) (Cdom)	Domestic and Commercial Flow (MGD) (Qdom)	Allowable Headworks (lbs/day) (Lhw)	Domestic/ Commercial (lbs/day) (Ldom)	Allowable Loading (lbs/day) (Lind)	Local Limit (mg/l) (Cind)	Safety Factor (%) (SF)
Antimony	0.2713	14.3	0	0.098	0.0025	14.0287	11.687676	0.292498395	10.22641001	4.51967656	10
Arsenic	0.3944	14.3	21		0.0025	13.9056	-	0.28993176	-	-	10
Cadmium	0.031	14.3	60	0.018	0.0005	14.269	5.36679	0.05950173	4.77060927	18.4521129	10
Chromium	0.6438	14.3	55	0.956	0.0025	13.6562	253.3654933	0.28473177	227.7442122	42.4160601	10
Chrom., hex.	0.0751	14.3	58	0.031	0.005	14.2249	8.802671429	0.59317833	7.329225956	11.7017852	10
Copper	2.8959	14.3	81	0.043	0.017	11.4041	26.99087368	1.616873298	22.67491302	0.93884958	10
Cyanide, free	0.8007	14.3	93	0.025	0.0025	13.4993	42.59357143	0.281460405	38.05275388	5.69836433	10
Cyanide, total	0.8007	14.3	75		0.0025	13.4993	-	0.281460405	-	-	10
Lead	2.8959	14.3	82	0.041	0.0025	11.4041	27.16523333	0.237775485	24.21093452	1.0024482	10
Mercury	0.3337	14.3	66	0.000079	0.0001	13.9663	0.027710876	0.011647894	0.013291895	0.004776	10
Molybdenum	2.8792	14.3	33		0.005	11.4208	-	0.47624736	-	-	10
Nickel	2.7703	14.3	67	0.544	0.005	11.5297	196.6016	0.48078849	176.4606515	7.63756687	10
Selenium	0.3337	14.3	47	0.026	0.005	13.9663	5.850588679	0.58239471	4.683135101	1.68272997	10
Silver	0.1809	14.3	87		0.0011	14.1191	-	0.129528623	-	-	10
Zinc	2.8963	14.3	79	0.17	0.075	11.4037	96.54542857	7.13301435	79.75787136	3.30190033	10

(Qind) Industrial User total plant discharge flow in Million Gallons per Day (MGD) that contains a particular pollutant.

(Qpotw) POTW's average influent flow in MGD.

(Rpotw) Removal efficiency across POTW as percent.

(Ccrit) NPDES daily maximum permit limit for a particular pollutant in mg/l.

(Qdom) Domestic/commercial background flow in MGD.

(Cdom) Domestic/commercial background concentration for a particular pollutant in mg/l.

(Lhw) Maximum allowable headworks pollutant loading to the POTW in pounds per day (lbs/day).

(Ldom) Domestic/commercial background loading to the POTW for a particular pollutant in pounds per day (lbs/day).

(Lind) Maximum allowable industrial loading to the POTW in pounds per day.

(Cind) Industrial allowable local limit for a given pollutant in mg/l.

(SF) Safety factor as a percent.

8.34 Unit conversion factor

$$Lhw = \frac{8.34 * Ccrit * Qpotw}{1 - Rpotw}$$

* NOTE: The effluent limit for Selenium is listed in Part I, A in the City's current NPDES Permit No. 3PE00008*KD). The remaining limits are listed in Part II, X of the NPDES Permit.

TABLE B-2

Local Limits Determination Based on Activated Sludge Inhibition Level - Warren WPCC

Pollutant	ENVIRONMENTAL CRITERIA AND PROCESS DATA BASE						MAXIMUM LOADING		INDUSTRIAL		
	IU Pollut. Flow (MGD) (Qind)	POTW Flow (MGD) (Qpotw)	Removal Efficiency* (%) (Rprim)	Activated Sludge Inhibition Level** (mg/l) (Ccrit)	Domestic and Commercial		Allowable Headworks (lbs/day) (Lhw)	Domestic/ Commercial (lbs/day) (Ldom)	Allowable Loading (lbs/day) (Lind)	Local Limit (mg/l) (Cind)	Safety Factor (%) (SF)
					Conc. (mg/l) (Cdom)	Flow (MGD) (Qdom)					
Antimony	0.2713	14.3	0		0.0025	14.0287	-	0.292498395	-	-	10
Arsenic	0.3944	14.3		0.1	0.0025	13.9056	11.9262	0.28993176	10.44364824	3.17504057	10
Cadmium	0.031	14.3	15	1	0.0005	14.269	140.3082353	0.05950173	126.21791	488.194902	10
Chromium	0.6438	14.3	27	1	0.0025	13.6562	163.3726027	0.28473177	146.7506107	27.3314639	10
Chrom., hex.	0.0751	14.3		1	0.005	14.2249	119.262	0.59317833	106.7426217	170.424441	10
Copper	2.8959	14.3	22	1	0.017	11.4041	152.9	1.616873298	135.9931267	5.63076429	10
Cyanide, free	0.8007	14.3			0.0025	13.4993	-	0.281460405	-	-	10
Cyanide, total	0.8007	14.3	27	0.1	0.0025	13.4993	16.33726027	0.281460405	14.42207384	2.15969208	10
Lead	2.8959	14.3	57	0.1	0.0025	11.4041	27.73534884	0.237775485	24.72403847	1.02369315	10
Mercury	0.3337	14.3	10	0.1	0.0001	13.9663	13.25133333	0.011647894	11.91455211	4.2811009	10
Molybdenum	2.8792	14.3			0.005	11.4208	-	0.47624736	-	-	10
Nickel	2.7703	14.3	14	1	0.005	11.5297	138.6767442	0.48078849	124.3282813	5.38117452	10
Selenium	0.3337	14.3			0.005	13.9663	-	0.58239471	-	-	10
Silver	0.1809	14.3	20	0.25	0.0011	14.1191	37.269375	0.129528623	33.41290888	22.1467329	10
Zinc	2.8963	14.3	27		0.075	11.4037	-	7.13301435	-	-	10

(Qind) Industrial User total plant discharge flow in Million Gallons per Day (MGD) that contains a particular pollutant.
(Qpotw) POTW's average influent flow in MGD.
(Rprim) Removal efficiency across across primary treatment as percent.
(Ccrit) Activated sludge threshold inhibition level, mg/l.
(Qdom) Domestic/commercial background flow in MGD.
(Cdom) Domestic/commercial background concentration for a particular pollutant in mg/l.
(Lhw) Maximum allowable headworks pollutant loading to the POTW in pounds per day (lbs/day).
(Ldom) Domestic/commercial background loading to the POTW for a particular pollutant in pounds per day (lbs/day).
(Lind) Maximum allowable industrial loading to the POTW in pounds per day.
(Cind) Industrial allowable local limit for a given pollutant in mg/l.
(SF) Safety factor as a percent.
8.34 Unit conversion factor

$$Lhw = \frac{8.34 * Ccrit * Qpotw}{1 - Rprim}$$

* See Table 3-9 in the "Guidance Manual on the Development and Implementation of Local Discharge Limitations Under the Pretreatment Program", EPA #833-B-87-202, December 1987.

** See Table 3-2 in the Guidance Manual shown in "*" above.

TABLE B-3

Local Limits Determination Based on Nitrification Inhibition Level - Warren WPCC

Pollutant	ENVIRONMENTAL CRITERIA AND PROCESS DATA BASE						MAXIMUM LOADING		INDUSTRIAL		
	IU Pollut. Flow (MGD) (Qind)	POTW Flow (MGD) (Qpotw)	Removal Efficiency (%) (Rsec)	Nitrification Inhibition Level* (mg/l) (Ccrit)	Domestic and Commercial Conc. (mg/l) (Cdom)	Domestic and Commercial Flow (MGD) (Qdom)	Allowable Headworks (lbs/day) (Lhw)	Domestic/ Commercial (lbs/day) (Ldom)	Allowable Loading (lbs/day) (Lind)	Local Limit (mg/l) (Cind)	Safety Factor (%) (SF)
Antimony	0.2713	14.3	0		0.0025	14.0287	-	0.292498395	-	-	10
Arsenic	0.3944	14.3	21	1.5	0.0025	13.9056	226.4468354	0.28993176	203.5122201	61.8710569	10
Cadmium	0.031	14.3	60	5.2	0.0005	14.269	1550.406	0.05950173	1395.305898	5396.86663	10
Chromium	0.6438	14.3	55	0.25	0.0025	13.6562	66.25666667	0.28473177	59.34626823	11.0529039	10
Chrom., hex.	0.0751	14.3	58	1	0.005	14.2249	283.9571429	0.59317833	254.9682502	407.080328	10
Copper	2.8959	14.3	81	0.05	0.017	11.4041	31.38473684	1.616873298	26.62938986	1.10258379	10
Cyanide, free	0.8007	14.3	93		0.0025	13.4993	-	0.281460405	-	-	10
Cyanide, total	0.8007	14.3	75	0.34	0.0025	13.4993	162.19632	0.281460405	145.6952276	21.8177242	10
Lead	2.8959	14.3	82	0.5	0.0025	11.4041	331.2833333	0.237775485	297.9172245	12.3351945	10
Mercury	0.3337	14.3	66		0.0001	13.9663	-	0.011647894	-	-	10
Molybdenum	2.8792	14.3	33		0.005	11.4208	-	0.47624736	-	-	10
Nickel	2.7703	14.3	67	0.25	0.005	11.5297	90.35	0.48078849	80.83421151	3.49866495	10
Selenium	0.3337	14.3	47		0.005	13.9663	-	0.58239471	-	-	10
Silver	0.1809	14.3	87		0.0011	14.1191	-	0.129528623	-	-	10
Zinc	2.8963	14.3	79	0.08	0.075	11.4037	45.43314286	7.13301435	33.75681422	1.39750014	10

(Qind) Industrial User total plant discharge flow in Million Gallons per Day (MGD) that contains a particular pollutant.

(Qpotw) POTW's average influent flow in MGD.

(Rsec) Removal efficiency across primary treatment and secodary treatment as percent.

(Ccrit) Nitrification threshold inhibition level, mg/l.

(Qdom) Domestic/commercial background flow in MGD.

(Cdom) Domestic/commercial background concentration for a particular pollutant in mg/l.

(Lhw) Maximum allowable headworks pollutant loading to the POTW in pounds per day (lbs/day).

(Ldom) Domestic/commercial background loading to the POTW for a particular pollutant in pounds per day (lbs/day).

(Lind) Maximum allowable industrial loading to the POTW in pounds per day.

(Cind) Industrial allowable local limit for a given pollutant in mg/l.

(SF) Safety factor as a percent.

8.34 Unit conversion factor

$$Lhw = \frac{8.34 * Ccrit * Qpotw}{1 - Rsec}$$

* See Table 3-4 in the "Guidance Manual on the Development and Implementation of Local Discharge Limitations Under the Pretreatment Program", EPA #833-B-87-202, December 1987.

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TABLE B-4

Local Limits Determination Based on USEPA 503 Sludge Regulations - Warren WPCC

Pollutant	ENVIRONMENTAL CRITERIA AND PROCESS DATA BASE								MAXIMUM LOADING		INDUSTRIAL		
	IU Pollut. Flow (MGD) (Qind)	POTW Flow (MGD) (Qpotw)	Sludge Flow (MGD) (Qsldg)	Percent Solids (%) (PS)	Removal Efficiency (%) (Rpotw)	503 Sludge Criteria (mg/kg) (Cslcrit)	Domestic and Commercial Conc. (mg/l) (Cdom)	Commercial Flow (MGD) (Qdom)	Allowable Headworks (lbs/day) (Lhw)	Domestic/ Commercial (lbs/day) (Ldom)	Allowable Loading (lbs/day) (Lind)	Local Limit (mg/l) (Cind)	Safety Factor (%) (SF)
Antimony	0.2713	14.3	0.06	23	0		0.0025	14.0287	-	0.2924984	-	-	10
Arsenic	0.3944	14.3	0.06	23	21	75	0.0025	13.9056	41.10428571	0.28993176	36.70392538	11.15859606	10
Cadmium	0.031	14.3	0.06	23	60	85	0.0005	14.269	16.3047	0.05950173	14.61472827	56.52791935	10
Chromium	0.6438	14.3	0.06	23	55		0.0025	13.6562	-	0.28473177	-	-	10
Chrom., hex.	0.0751	14.3	0.06	23	58		0.005	14.2249	-	0.59317833	-	-	10
Copper	2.8959	14.3	0.06	23	81	4300	0.017	11.4041	610.9822222	1.6168733	548.2671267	22.7008749	10
Cyanide, free	0.8007	14.3	0.06	23	93		0.0025	13.4993	-	0.28146041	-	-	10
Cyanide, total	0.8007	14.3	0.06	23	75		0.0025	13.4993	-	0.28146041	-	-	10
Lead	2.8959	14.3	0.06	23	82	840	0.0025	11.4041	117.899122	0.23777549	105.8714343	4.383582506	10
Mercury	0.3337	14.3	0.06	23	66	57	0.0001	13.9663	9.939763636	0.01164789	8.934139379	3.210187994	10
Molybdenum	2.8792	14.3	0.06	23	33	75	0.005	11.4208	26.15727273	0.47624736	23.06529809	0.960552679	10
Nickel	2.7703	14.3	0.06	23	67	420	0.005	11.5297	72.14722388	0.48078849	64.451713	2.789597929	10
Selenium	0.3337	14.3	0.06	23	47	100	0.005	13.9663	24.48765957	0.58239471	21.45649891	7.709684422	10
Silver	0.1809	14.3	0.06	23	87		0.0011	14.1191	-	0.12952862	-	-	10
Zinc	2.8963	14.3	0.06	23	79	7500	0.075	11.4037	1092.64557	7.13301435	976.2479983	40.41574247	10

(Qind) Industrial User total plant discharge flow in Million Gallons per Day (MGD) that contains a particular pollutant.
(Qpotw) POTW's average influent flow in MGD.
(Qsldg) Sludge flow to disposal in MGD.
(PS) Percent solids of sludge to disposal.
(Rpotw) Removal efficiency across POTW as a percent.
(Cslcrit) 503 sludge criteria in mg/kg dry sludge.
(Qdom) Domestic/commercial background flow in MGD.
(Cdom) Domestic/commercial background concentration for a particular pollutant in mg/l.
(Lhw) Maximum allowable headworks pollutant loading to the POTW in pounds per day (lbs/day).
(Ldom) Domestic/commercial background loading to the POTW for a particular pollutant in pounds per day (lbs/day).
(Lind) Maximum allowable industrial loading to the POTW in pounds per day.
(Cind) Industrial allowable local limit for a given pollutant in mg/l.
(SF) Safety factor as a percent.
8.34 Unit conversion factor

$$Lhw = \frac{8.34 * Cslcrit * (PS/100) * Qsldg}{Rpotw}$$

Water Pollution Control Department

City of Warren, Ohio

Michael J. O'Brien
Mayor

2323 Main Ave., S.W., Warren, Ohio 44481-9603
Phone: (330) 841-2591 Fax: (330) 841-2717

William Douglas Franklin
Director of Service-Safety

Thomas A. Angelo
Director

James Wilden
Superintendent

Greg Lubert
Sewer Systems
Superintendent

Thomas Petrilla
Maintenance Supervisor

James A. Black
Network Systems
Supervisor

Michael T. Welke
Biosolids Manager

Daniel M. Aulizia
Biosolids Salesman

Keith Folman
Industrial Pretreatment
Coordinator

Gary W. Shaffer
Engineering Aid IV

November 22, 2006

Erm Gomes
OEPA Northeast District Office
2110 East Aurora Road
Twinsburg, Ohio 44087

RECEIVED
DEC 0 1 2006
OHIO EPA NEDO

Re: NPDES Form 2A Permit Application

Dear Erm,

Please accept my apologies for the late submittal of this application. I did not realize that it was due in the early part of 2007 and unfortunately I allowed it to get buried in a pile of papers on my desk. It turned out to be a benefit though, due to your visit on November 21, 2006 where you assisted in clarifying some concerns I had in answering some of the questions on the permit. Again, thank you for the time and advice.

Our Combined Sewer Separation Project was completed in September of 2006. As a result, the City of Warren, Ohio no longer has sewers designed to operate as a combined system. We now have separate sanitary and storm sewers. However, when the High Street CSO #3PE00008020 was eliminated during the final stages of construction, Warren experienced an intense rainfall of approximately 1.9" inches in a little of 1 hour. This resulted in basement backups in the downtown business area that previously never surcharged. A decision was made to open the overflow on High Street and begin an investigation as to why the basements would backup when all of the surface water had been allegedly removed. This resulted in the construction of a Sanitary Sewer Overflow.

This investigation resulted in the identification of numerous parking lot and roof drains in the downtown area that were still connected to the sanitary sewer that the engineering firm's preliminary studies had missed. Since September, 10 of 14 identified parking lot clear water connections have been redirected to the storm sewer and 7 of 31 roof drain connections have been redirected. Most of the roof drains are from buildings in excess of 3,000 square feet. 20 of these buildings have roof drains with internal plumbing that will require extensive modifications for the redirection of the clear water. Our goal is to have all of these clear water point sources redirected by the end of the first quarter of 2007.

Additionally, the original design plans for the downtown sewer separation included the redirection of sanitary flows south on Mahoning Avenue to a new 15" inch line that would parallel an existing 15" sanitary that discharges flow from the downtown area to the main interceptor. This would have substantially reduced total flow

being received at the location of the of the High Street SSO. When the plans were submitted for OEPA and P.T.I. approval, this diversion was mistakenly omitted by the engineering firm. Our plans are to meet with OEPA and request a change order to our existing loan for the Downtown Sewer Separation that will allow for the sanitary flow diversion. This will allow us to completely eliminate the newly created SSO on High Street. We already have preliminary design and cost estimates. We anticipate having final design and costing estimates by the end of next week. With this data in hand, we hope to meet with OEPA DEFA during the fist week of December to finalize funding options. Our goal is to eliminate the SSO at High Street as early as possible in 2007. Any assistance that you can provide in allowing us to achieve this mutual goal will be greatly appreciated.

As a result of these new developments, I have identified the High Street overflow in the NPDES permit under question 4a. If you have any questions regarding this information, please do not hesitate to contact me.

Thank you,

Thomas A. Angelo
Director
Water Pollution Control Center

Pc: Jim Wilden
Plant File
Attachments

File; c:/wpc/word/Erm Gomes NPDES Permit